

What is claimed is:

1. A burner assembly, comprising:
a duct;
a burner disposed within the duct, the burner including a gas manifold and first and second baffles extending therefrom and defining a combustion chamber; and
a protective chamber disposed within the duct and including a profile opening adapted to receive a flame from the burner.
2. The burner assembly of claim 1, wherein the first and second baffles each include a plurality of apertures.
3. The burner assembly of claim 1, wherein protective chamber includes imperforate walls.
4. The burner assembly of claim 1, wherein the combustion chamber is wedged shaped.
5. The burner assembly of claim 1, wherein the protective chamber includes a face plate and side panels disposed perpendicular to each other.
6. The burner assembly of claim 3, wherein the face place is perpendicular to a longitudinal axis of the duct.
7. The burner assembly of claim 1, further including first and second panels slidably mounted to the face plate.
8. The burner assembly of claim 1, wherein the burner is adapted to produce a flame extending past the baffles by a length α , and wherein the protective chamber extends past the first and second baffles by a distance greater than α .

9. The burner assembly of claim 1, wherein the face plate includes a top, a bottom, and first and second sides defining the profile opening, the burner being disposed on an upstream side of the profile opening, the protective chamber sides being disposed on a downstream side of the profile opening.

10. The burner assembly of claim 9, wherein the face plate top and bottom are spaced from the burner by a distance Δ , and the face plate first and second sides are spaced from the burner by a distance γ , the distances Δ and γ being fixed.

11. The burner assembly of claim 1, wherein the protective chamber and duct define first and second plenums flanking the protective chamber.

12. A burner assembly, comprising:
- an air duct;
- an interior wall spanning across an interior of the air duct, the interior wall having at least three openings, a first opening in an interior of the wall, the second and third openings flanking the wall;
- a burner having a combustion chamber and a flame outlet, the flame outlet being positioned proximate the interior wall first opening; and
- first and second side walls extending from the interior wall away from the burner.
13. The burner assembly of claim 12, wherein the burner is adapted to generate a flame extending past the combustion chamber by a distance α , the first and second side walls extending past the interior wall by a distance greater than α .
14. The burner assembly of claim 12, wherein the burner includes a gas manifold having perforated baffles extending therefrom, the combustion chamber being wedge-shaped.
15. The burner assembly of claim 12, further including a blower within the air duct.

16. A burner assembly, comprising:
an air duct adapted to direct heated air and products of combustion to a space to be heated;
a gas supply disposed within the air duct;
an ignition means proximate the gas supply;
a combustion chamber downstream of the gas supply;
a protective chamber downstream of the combustion chamber, the protective chamber including a profile opening; and
first and second air plenums flanking the protective chamber.

17. The burner assembly of claim 16, wherein the combustion chamber is formed by a gas manifold and first and second baffles extending from the gas manifold, the first and second baffles including a plurality of apertures, combustion air for the combustion chamber entering through the plurality of baffle apertures.

18. The burner assembly of claim 16, wherein the protective chamber is formed by a face plate, first and second sides depending from the face plate and a top and bottom of the duct.

19. The burner assembly of claim 18, further including first and second slidable panels mounted to the face plate.

20. The burner assembly of claim 17, further including gaps between the profile opening and the baffles, the dimensions of the gaps being predetermined.